**IN THE CLAIMS:**

The text of all pending claims (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (Currently Amended) An object interaction expression apparatus for expressing interactions between plural objects that are simulated on requests of a user in a virtual space and providing expressed interactions for the user, comprising:

an expression mode storing unit that stores in a correlated form an interaction magnitude of an object and a plurality of expression modes in which the interaction magnitude will be expressed, corresponding respectively to before, during and after interaction of the objects;

an interaction magnitude calculating unit that calculates interaction magnitudes of objects that interact with each other;

an expression controller that selects respectively one or more expression modes corresponding to before, during and after interaction of the objects, and express the interaction magnitude of the objects corresponding to before, during and after interaction of the objects in selected one or more expression modes, wherein the one or more expression modes include at least one of impact waveform, animation, color, impact sound and vibration; and

an interaction magnitude providing unit that provides controlled expression of the interaction magnitude of the objects for the user.

2. (Original) The object interaction expression apparatus according to claim 1, wherein the interaction magnitude calculating unit calculates the interaction magnitude from a distance between the objects.

3. (Original) The object interaction expression apparatus according to claim 2, wherein the interaction between the objects is collision, and the interaction magnitude calculating unit calculates the interaction magnitude from the distance between the objects after an elastic deformation of the objects.

4. (Original) The object interaction expression apparatus according to claim 2, wherein the interaction between the objects is collision, and the interaction magnitude calculating unit

calculates the interaction magnitude from the distance between the objects after a plastic deformation of the objects.

5. (Original) The object interaction expression apparatus according to claim 1, wherein the interaction between the objects is collision, and the interaction magnitude calculating unit calculates the interaction magnitude in terms of a denting amount.

6. (Original) The object interaction expression apparatus according to claim 1, wherein the expression mode storing unit stores as correlated expression modes visual mode, and one or both of aural and tactile expression modes.

7. (Original) The object interaction expression apparatus according to claim 4, wherein the interaction between the objects is collision, and the expression mode storing unit stores pre-collision and post-collision interaction magnitudes by correlating the interaction magnitudes with the expression mode expressed by changing colors, and the interaction magnitudes during collision by correlating the interaction magnitudes with the expression modes expressed by one or more of impact waveform, impact wave animation, color, impact sound, and vibrations.

8. (Original) The object interaction expression apparatus according to claim 1, wherein the objects are constituent elements of a product, and the expression modes that express the interaction magnitude constitute modes comprehensible by a designer of the product.

9. (Currently Amended) A method for expressing interactions between plural objects that are simulated on requests of a user in a virtual space and providing expressed interactions for the user, comprising the steps of:

storing in a correlated form an interaction magnitude of an object and a plurality of expression modes in which the interaction magnitude will be expressed, corresponding respectively to before, during and after interaction of the objects;

calculating interaction magnitudes of objects that interact with each other;

selecting respectively one or more expression modes corresponding to before, during and after interaction of the objects, and express the interaction magnitude of the objects corresponding to before, during and after interaction of the objects in selected one or more expression modes, wherein the one or more expression modes include at least one of impact waveform, animation, color, impact sound and vibration; and

providing controlled expression of the interaction of the objects for the user.

10. (Original) The method according to claim 9, wherein the calculating includes calculating the interaction magnitude from a distance between the objects.

11. (Original) The method according to claim 10, wherein the interaction between the objects is collision, and the calculating includes calculating the interaction magnitude from the distance between the objects after an elastic deformation of the objects.

12. (Original) The method according to claim 9, wherein the storing includes storing as correlated expression modes visual mode, and one or both of aural and tactile expression modes.

13. (Original) The method according to claim 12, wherein the interaction between the objects is collision, and the storing includes storing pre-collision and post-collision interaction magnitudes by correlating the interaction magnitudes with the expression mode expressed by changing colors, and the interaction magnitudes during collision by correlating the interaction magnitudes with the expression modes expressed by one or more of impact waveform, impact wave animation, color, impact sound, and vibrations.

14. (Currently Amended) A computer-readable medium that stores a computer program that contains computer-executable instructions for causing a computer to execute a method for expressing interactions between plural objects that move by simulation in a virtual space, the method comprising the steps of:

storing in a correlated form an interaction magnitude of an object and a plurality of expression modes, in which the interaction magnitude will be expressed, corresponding respectively to before, during and after interaction of the objects;

calculating interaction magnitudes of objects that interact with each other; and

selecting respectively one or more expression modes corresponding to before, during and after interaction of the objects, and express the interaction magnitude of the objects in selected one or more expression modes, wherein the one or more expression modes include at least one of impact waveform, animation, color, impact sound and vibration; and

providing controlled expression of the interaction magnitude of the objects for the user.

15. (Previously Presented) The computer-readable medium according to claim 14, wherein the calculating includes calculating the interaction magnitude from a distance between the objects.

16. (Previously Presented) The computer-readable medium according to claim 15, wherein the interaction between the objects is collision, and the calculating includes calculating the interaction magnitude from the distance between the objects after an elastic deformation of the objects.

17. (Previously Presented) The computer-readable medium according to claim 14, wherein the storing includes storing as correlated expression modes visual mode, and one or both of aural and tactile expression modes.

18. (Previously Presented) The computer-readable medium according to claim 17, wherein the interaction between the objects is collision, and the storing includes storing pre-collision and post-collision interaction magnitudes by correlating the interaction magnitudes with the expression mode expressed by changing colors, and the interaction magnitudes during collision by correlating the interaction magnitudes with the expression modes expressed by one or more of impact waveform, impact wave animation, color, impact sound, and vibrations.

19. (New) A method, comprising:

storing, in a storage, a magnitude of an interaction of an object and modes of an expression that relate to interactions before, during, and after collision of objects;

calculating magnitudes of an interaction of objects interacting with each other;

expressing the magnitude of the interaction of the objects corresponding to the interactions before, during, and after the collision of the objects responsive to a selection of at least one of the modes of the expression that includes at least one or more waveform, animation, color, sound, and vibration; and

displaying a controlled expression of the interaction magnitude of the objects to the user.